



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
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NEW YORK, NY 10007-1856

JAN 23 2008

Mr. Jeffrey A. Leed
Leed Environmental, Inc.
Van Reed Office Plaza
2209 Quarry Drive, Suite C-35
Reading, PA 19609

Re: Comments on the September 2007 Groundwater Monitoring Report
NL Industries Superfund Site, Pedricktown, NJ

Dear Mr. Leed:

The United States Environmental Protection Agency (EPA) has reviewed the Groundwater Monitoring Report, dated September 2007, which summarizes the results of groundwater sampling activities conducted in April 2007 by CSI Environmental, LLC at the NL Industries, Inc. Superfund Site.

The list provided below contains comments on specific sections referenced in the September 2007 Groundwater Monitoring Report (GWMR). For each comment, please amend the GWMR accordingly.

1. *Page 2, Section 2.1, paragraph 1; Page 9, Section 4.1; & Page 12:* The Sections state that surface water bodies or "wet areas" located between the site and the properties along Route 130 cause a groundwater flow divide that prevents the migration of site-related constituents to the off-site properties. However, prior to the 2007 sampling event, the surface water bodies had not been identified on any of the figures or maps previously submitted to EPA and groundwater flow has consistently been documented as being directed towards the properties along Route 130. While a groundwater flow divide may exist, a single round of groundwater elevation measurements does not provide conclusive evidence to this fact. Please amend the GWMR to clarify that the initial data collected suggests that there may be a groundwater divide. Groundwater elevation in this area should continue to be monitored in an effort to conclusively substantiate the existence of the groundwater divide.
2. *Page 9, paragraph 1 & Page 11:* The paragraph states that the continuing trend of improving groundwater quality has been confirmed and that the area of impact is much smaller than previously measured. While lead concentrations have significantly decreased across the site, a comparison of April 2007 data with historical data shows that the extent of the cadmium plume has decreased very little since 1998 and between 2004 and 2007 cadmium concentrations have increased in wells 22 (dissolved), 30R, 31, JS (dissolved), JDR, KDR, OS, and



SD. Wells JS, JDR, and 22 are upgradient wells. Well 11, which is located downgradient on the westernmost portion of the site, is also a concern. Although concentrations of cadmium have decreased in this well since 2004, it has continually shown concentrations well above New Jersey Groundwater Quality Standards (NJGWQS) and is located directly upgradient from the West Stream. Accordingly, the GWMR should acknowledge and clarify the difference between the lead and cadmium trends.

3. *Page 9, Section 4.2:* The correlation between high turbidity with high concentrations of cadmium has not been conclusively supported by the data. The twelve wells with cadmium concentrations above NJGWQS are within, or very close to within, the acceptable range of turbidity (<10 NTU) according to the criteria established in the December 2006 *Groundwater Sampling Plan*. Wells with turbidity values greater than 40 NTU, which are not considered to be reflective of ambient groundwater conditions, have cadmium levels below NJGWQS or non-detect. While the correlation between lead and turbidity is stronger, it is worth it to note that the wells with the two highest lead concentrations have turbidity values in the acceptable range. While statements related to reporting turbidity levels and cadmium and lead concentrations may remain in the GWMR, conclusions regarding a correlation between the turbidity levels and the concentration of lead and cadmium should be removed from the report.
4. *Page 10, Section 4.4:* The existence of “shallow” and “deep” zones of the unconfined aquifer is mentioned throughout this section and is depicted in Figures 5 - 8. However, wells 34, ND, and SD are included as part of the deep unconfined aquifer (Figures 6 & 8), yet they are screened in the same interval as well 30R which is included in the shallow unconfined aquifer (Figure 5 & 7). Please provide an explanation as to how the shallow and deep zones of the aquifer have been defined and make corrections to the above referenced figures as necessary.
5. *Page 10 & 11, Section 4.4, 4th paragraph:* Monitoring well SD, with a lead concentration of 31 µg/L, should be included as a sample with lead detection based on criteria established in the December 2006 *Groundwater Sampling Plan*.
6. *Page 13, Section 5, 3rd paragraph & Table 5:* This Section indicated that Wells 13-17 and 34 would no longer be monitored. EPA would like continued monitoring of these wells in order to confirm the presence of a groundwater flow divide, and to assess any migration of site related constituents towards the off-site properties.
7. *Figures 7 & 8:*
 1. Well 26 should be included in the plume drawings.
 2. 4.0 µg/L (NJGWQS) should be used as the low range value for cadmium when determining isoconcentration lines.

Please update the GWMR to reflect the comments above and resubmit the amended report to EPA within 14 calendar days of receipt of this letter. If you have further questions or concerns regarding EPA's comments to the September 2007 GWMR, please do not hesitate to contact me.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Theresa Hwilka".

Theresa Hwilka, Project Manager
Southern New Jersey Remediation Section

cc: Steve Maybury, NJDEP